ROUTINE AS DEVIATION

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ABSTRACT

We draw on evidence scattered across thick descriptions of organizations to outline an alternative model of routine. Instead of defining routine as a process of compliance with prescribed rules and procedures we define it as a process of deviation from the prescribed elements of organizations, resulting from the mutual constitution of repetitive work and improvisation. This view of routine underscores its adaptive nature and suggests that flexibility can be achieved not only by nimble and openly innovative organizations but also by large and organizations engaging in ‘closet’ innovation.

INTRODUCTION

The purpose of this paper is to explain the relationship between repetition and improvisation in organizations. It contributes with an alternative view of routine in organizations – one where routine results from deviation from prescribed procedures and from improvisation, instead of resulting from compliance with prescribed work practices.

Repetition and improvisation are almost antonyms in management research. Repetition is described as a central aspect of organizations and, some would say, their very reason (Barnard, 1938; Williamson, 1981). Repetition is the touchstone of efficiency and the reason why organizations are a dominant form of coordination of work. Repetition is a central goal for organizations because it allows them to reach the levels of efficiency that make large-scale production possible and profitable. Improvisation is described as an exceptional practice in organizations (Crossan, Cunha, Vera, & Cunha, 2005; Weick, 1998). It is inefficient and risky and should thus be reserved only for the most difficult competitive challenges.

However, even the earliest thick descriptions of organizations show that improvisation is crucial for organizational routine – the recursiveness of employees' and managers' experience and the consistency of the organization's performance (e.g. Blau, 1955). Research on unprescribed work (Lipsky, 1980), identity (Ashforth & Kreiner, 1999) and alienation (Boland & Hoffman, 1983; Gouldner, 1954) in organizations all concur on the improvisational nature of even the most routine of tasks at work. Each of these literatures suggests that the experience of routine is the outcome of everyday micro-adaptations and unprescribed tactics. Together they prove that the source of routine described in many studies of strategy and organizations (Dandeker, 1990; Goldman & Van Houten, 1977; Tushman & O'Reilly, 1996) are not prescribed

roles, rules and procedures. Instead that source lies in employees and managers ability to address a multiplicity of situated challenges by making do with their available resources and conditions for action (Brown & Duguid, 1991; Orlikowski, 2000). But if repetitive work comes from improvisation, where does improvisation come from? Studies of improvisation in corporate settings (Heath & Luff, 2000; Rosenthal, 2004) and research on the achievement of mastery within a community of practice (Lave & Wenger, 1991) point to repetitive work itself as a favorable context for the development of mastery in improvisation. Repetitive work provides motivation, tailor-designed work and immediate and specific feedback – the core factors for the development of mastery in any skill (Ericsson, Krampe, & Tesch-Romer, 1993).

Improvisation and repetitive work are thus mutually constituted and routine is the outcome of their dualistic relationship. To make this point, we begin by outlining the mainstream view on improvisation as the opposite of repetitive work. We draw on evidence scattered across studies of everyday life in organizations to present an alternative view of repetitive work. We argue that repetitive work is an improvisational achievement and, at the same time, the context where improvisation is developed in organizations. We conclude by explaining how routine is as a dynamic achievement that depends on improvisation, instead of a stable state that depends on compliance with prescribed work practices.

IMPROVISATION VS. REPETITION

Management research frames improvisation as an exceptional process. Improvisation is exceptional because it is only enacted in exceptional circumstances and because it is only enacted by exceptional individuals. Improvisation is what happens when repetition is no longer possible.

Improvisation is an exceptional practice

The management literature frames improvisation as an exceptional practice. This is as much the case in the broader research on management (Adler & Borys, 1996; Mendonca, Cunha, Kaivo-oja, & Ruff 2004; Ouchi, 1980) as it is in the specific literature on improvisation (Peplowski, 1998; Vera & Crossan, 2004; Weick, 1998). Improvisation is explained as a necessary deviation from the norm. Organizations are more efficient and companies are at their most profitable when they carry out repetitive work. Only when external challenges threaten the stable exploitation of a specific domain do organizations need to engage in exploration to maintain their effectiveness.

Improvisation is but one process of exploration, and a last resort for that matter. Much of the literature on exploration advocates the value of a pre-defined, repetitive set of planning practices when designing a new organizational strategy (Levinthal & Warglien, 1999; McGrath, 2001). Procedures such as those advocated by scenario planning (Godet & Roubelat, 1996) and other practices of systematic strategy-making are described as more adequate, more robust and effective than organizational improvisation (Repenning, 2001). Improvisation is a last resort. In all but the most challenging contexts it is lacking in efficiency and effectiveness. Improvisation follows an aesthetic of imperfection. It generates and feeds on mishaps, mistakes and errors (Weick, 1993). It centers on an emergent course by exploring multiple alternatives and by putting resources to multiple and often non-canonical uses (Orlikowski, 1996). This process is one where resources are used for experimentation's sake and where alternative strategies are enacted with little if any forethought. Improvisation can thus jeopardize the organization by

spreading its resources too thin and by generating errors that lead the organization into strategic paths where success is difficult and the cost of failure is high (Day, 1977).

The literature on improvisation in organizations acknowledges these pitfalls. It circumscribes improvisation to competitive contexts where all other practices fail – contexts that couple high uncertainty with a high rate of change (Miner, Bassoff, & Moorman, 2001). In these environments planning is not only difficult but also dangerous. Planning is difficult in such environments because information on competitive dynamics is ambiguous and has a short shelf-life. If an organization attempts to follow a routine planning process it will be able to produce only a broad strategy and one that is already outdated at the moment of its implementation (Ciborra, 1996). Planning is not only difficult but also dangerous in fast-changing and uncertain environments. When managers attempt to make sense of their environment from the executive suite, they impose their own mental models on competitive dynamics (Tripsas & Gavetti, 2002). Their mental models become blinding spots – competitive changes become increasingly invisible until they hit the bottom line.

In these contexts, where the repeated enactment of the planning process is lacking, improvisation is very effective. Research in fast-changing competitive environments has shown that improvisation is not only the main alternative but also the most robust practice for surviving and thriving (Brown & Eisenhardt, 1997). When improvising, agents address challenges effectively because they are able to learn and plan while acting. Improvisation is first and foremost about acting. When improvising, agents attempt to address challenges by acting on them, instead of choosing to reflect and plan the best way to address them. However, improvising is more than just acting. When improvising agents learn more about the challenge they are facing, making their attempts to address it increasingly knowledgeable and increasingly

powerful (Weick, 1987). Improvisation is therefore effective in handling novel challenges because it allows agents to reflect and plan while acting. This convergence between planning and execution makes improvisation a faster process than reflective planning. Improvisation turns conception and implementation into parallel and iterative processes. Crafting a plan of action and executing it are processes that happen simultaneously when improvising, making this process shorter than the standard sequence of planning and implementation. Also, improvisation is faster than planning because it allows action to inform planning as it unfolds. In the traditional planning process learning only occurs after action when plans are adjusted (Moorman & Miner, 1998).

Finally, improvisation is more efficient than planning because it draws on available resources, instead of procuring new ones. In the planning approach, the focus is on finding and using the right resources. This means that if the organization does not have the necessary resources to deal with novel and unexpected challenges, these need to be obtained. Improvisation follows quite a different approach. When improvising to deal with novel and unexpected challenges, improvisers draw on available resources, using them creatively. The focus is on making do with resources that agent currently hold using them in new and creative ways (Machin & Carrithers, 1996; Peplowski, 1998).

Improvisers as exceptional people

Research on improvisation in organizations suggests that not only is improvisation an exceptional practice but also that improvisers are exceptional people. The literature on improvisation in organizations suggests that this practice can only be carried out by highly skilled performers (Hatch, 1999; Lewin, 1998). This literature has its roots in the translation of

jazz improvisation into organizational settings. In jazz performance, improvisation is a skillful accomplishment. It can only be carried out successfully after a long time of practice and many mistakes and failures (Bastien & Hostager, 1988). When translated to organizations, this is interpreted to mean that improvisation is reserved for experts with enough experience of improvisation to have acquired considerable knowledge about the inner workings of the organization and its competitive environment (Hatch, 1997). This knowledge allows experts to be attuned to their environment. Experts are thus able to recognize environmental threats and opportunities more precisely. Experts' experience and knowledge allows them to adjust their improvisations to competitive conditions because they are more skilled at reading feedback on their actions, tactics and strategies. More importantly, or so the jazz-based view of improvisation says, expert improvisers command a higher level of skill in using the tools and resources available to them (Kamoche & Cunha, 2001). Experts are skillful bricoleurs. They are able to use resources in novel ways to address the challenges they face.

The literature on organizational improvisation also suggests that improvisers have a different disposition than employees that engage in repetitive work (Pasmore, 1998). Improvisers have a bias for action. They have developed a habitus (cf. Bourdieu, 1990) to address challenges, threats and opportunities by acting on them once they surface, instead of first stepping back, think about alternative courses of action, deciding which is the most appropriate and only then implementing it. Some researchers argue that this disposition is acquired through occupational socialization. This bias for action can be developed in the early stages of socialization into an occupation, especially in those occupations that place this norm at the heart of their culture, such as jazz musicians (Berliner, 1994). There are, however, organizations where improvisation is valued as much as it is among these occupational communities. In these organizations, where

innovation and flexibility are valued and fostered (e.g. Hargadon & Sutton, 1997), there are formal and informal processes that foster the internalization of a disposition for action and formal and informal processes that sanction the enactment of this disposition in everyday work. Other researchers argue that this bias for action is acquired in early-age socialization. It is more akin to a personality trait than to a feature of an occupational culture (Berry & Irvine, 1986).

Taken together this means that improvisers are specialists. Recruiting and training are thus crucial processes for organizations to develop the capability to improvise. More importantly, this also means that employees that carry out the repetitive work in organizations can, at best, engage only in the simplest forms of improvisation.

Improvisation is at odds with repetitive work

Exceptional circumstances and exceptional employees are at odds with the mainstream view of repetitive work as mindless and effortless. Repetitive work is interpreted as carrying out a limited set of procedures over and over (cf. Taylor, 1947). This type of work is mindless because prescribed procedures are designed by managers. Employees need only to learn them and carry them out to the letter. If there is any challenge for employees' ingenuity in repetitive work, it is in the attempt to work less, shirking from performance targets (Burawoy, 1979).

Repetitive work is effortless because it only requires learning a limited set of procedures which do not need to be changed unless the organization faces unexpected competitive challenges (Dean & Snell, 1991). This type of work is also effortless because at least part of work processes are embedded in tools and resources (Batt, 1999).

The defining characteristics of repetitive work are that it is codifiable, that it is stable, and that it is relatively unambiguous. These three aspects of repetitive work allow the separation

between its planning and its execution (Bendix, 1947). According to the dominant models of repetitive work, managers take upon themselves the mindful and effortful task of designing prescribed roles, rules and procedures because they are the ones with the power and the knowledge to do so (Fayol, 1949). Employees are given the mindless and effortless (assuming that managers are competent in organizational deign) responsibility of enacting these prescribed roles, rules and procedures effectively. This is possible because repetitive work consists of observable, simple practices enacted to address recursive challenges. Organizations engage in repetitive work because part of the challenges they face are recursive. They occur consistently and recurrently across time. The recursive nature of such tasks allows workers to fine-tune and simplify a set of procedures to address them quickly and efficiently (Suchman, 1983). Because of the recursiveness of repetitive tasks and the simplicity of the practices enacted to address them, managers can easily observe these procedures and abstract them into a prescribed process (Findlay & McKinlay, 2003). Repetitive work is thus codifiable in the sense that it can be programmed into a set of explicit procedures, which can either be written down or embedded into a production technology and which can be used to address recurrent challenges with only minor changes, if any.

The ability to codify work practices is but one condition to standardize work so that it can be enacted repetitively by employees. If work processes are codifiable but need to be constantly readjusted to match competitive demands, standardization is not only impracticable but also unnecessary. Standardizable repetitive work needs an environment that absorbs a stable output (Liker, Collins, & Hull, 1999). The competitive environments where most organizations are located rarely provides a stable stream of work. Instead the stability necessary for repetitive work is an accomplishment of the organization (cf. Yan & Louis, 1999). Units at the boundary of the

organization and its environment shield those units that carry out repetitive work, buffering them from variations induced by the organization's competitive environment. This allows managers to focus on enforcing the repeated enactment of prescribed work practices without having to adjust for changes in the quantity and quality of production or service induced by the market.

Standardizing work so that it can be enacted repetitively requires the ability to enforce compliance with prescribed work processes. This ability hinges on the level of visibility of repetitive work (Sewell, 1998). If repetitive work is opaque to managers' scrutiny then, at the limit, employees could enact their own work practices as long as output are as expected, thus jeopardizing the efficiency and consistency of the production process. Conversely, if repetitive work is visible, managers are able to detect deviations and enforce compliance. Indeed, according to research on surveillance (Dandeker, 1990; Findlay et al., 2003), if visibility reaches high levels of transparency, then workers will comply with prescribed processes just out of fear of being detected. Visibility is thus very much at stake in repetitive work. The level of visibility of repetitive work is not, however, a feature of the task itself nor is it an organizational variable that managers can manipulated at will. Instead it is negotiated in everyday interactions as managers and workers attempt to maintain the level of visibility which best suits their purposes (eg. Webb & Palmer, 1998). Repetitive work can thus be standardized in a set of prescribed procedures that can be applied mindlessly and effortlessly to carry out the organization's production process. According to this view employees do not need to deviate from prescribed roles, rules and procedures because thee are designed to meet every challenge they face in their everyday work. Additionally, even if employees have other motivations to deviate from these prescribed elements of their job, the high level of surveillance that standardization allows prevents them to do so. Improvisation is seen as inadequate for routine work. This type of work,

such as that of assembly line workers and office clerks, is predictable and repetitive. It is more effective and efficient if it is limited to the implementation of planned and prescribed procedures. This is a long standing tenet in the management literature ever since Adam Smith's (1776 / 1991) description of a model pin factory. It has also been a feature of management practice, visible even today in the wide use of practices such as total quality management (Bain, Watson, Mulvey, Taylor, & Gall, 2002; Deming, 1986). To be precise, both the academic and the business literature on repetitive work have argued that even the most routine tasks in offices and assembly lines can benefit from some learning and flexibility (Adler et al., 1996; Denzin & Lincoln, 2000). However, both literatures suggest that increasing reflexivity and flexibility in routine work can be achieved by giving employees the time and power to decide how to organize their own work (Barker, 1993). However theory on, empirical studies of, and prescriptions for allowing employees to manage their own routine work keep conception and implementation temporally separated. Employees decide on how best perform their work during time specifically allocated for learning and planning, not while they are doing their work (Manz & Sims, 1987).

In sum, while improvisation is welcomed and fostered in novel and creative tasks, it is shun away of repetitive work.

THE MUTUAL CONSTITUTION OF IMPROVISATION AND REPETITION

In repetitive work, there is little if any room for improvisation. This work is seen as demanding little more than repeating a small set of procedures over and over again. Repetitive work is seen as mindless and cognitively effortless. Thick descriptions of everyday life in organizations, especially in those parts where repetitive work prevails, shows that such a view hides the frequent occurrence of improvisation across most jobs and occupations. There are a

number of theories supported by scattered evidence that amount to an alternative view of repetitive work and routine in organizations (e.g. Beynon, 1973; Jackall, 1978; Roy, 1960; Selznick, 1949). Our purpose is to integrate these theories and empirical studies of repetition to theorize repetition as a mindful and effortful everyday accomplishment. To this end we first explain how repetition is an improvisational accomplishment. We then argue that employees improvisational skills are themselves acquired in repetitive work. We end by discussing how routine emerges from the mutual constitution of repetitive work and improvisation.

Improvisation is needed for routine work

Research describes repetition as mindless and effortless. Repetition is associated with carrying out standardized procedures over and over. Repetition is mindless because it entails no learning or creativity. When carrying out repetitive work employees only need to apply a set of standardized procedures often limited by technology. The only learning task is to perform these procedures quickly. If these procedures are ergonomically well designed, this learning is achieved quickly and effortlessly (Smith, 1776 / 1991). Many modern organizations are able to cope with high turnover by focusing on standardizing production and service processes to the extent that they can be quickly mastered with only limited training (Glance, Hogg, & Huberman, 1997). Standardized procedures afford very little if any surprises in their enactment process and in their outcomes. Repetition has little if any need for creativity. Indeed, creativity and variation threaten the very reason for standardization and repetition. Variation takes time and resources, thus threatening the efficiency that repetition allows.

This view of repetition as mindless is at odds with empirical research. Shop-floor ethnographies have shown that maintaining the very conditions for repetition is an improvised

achievement and that carrying out standardized repetitive procedures is a fruitful occasion for learning (Burawoy, 1979; Gouldner, 1954).

The outcomes of repetitive work need improvised work practices

To the casual observer, settings where repetitive work is carried out, such as assembly lines and typing pools, may seem to be a flat pool of routine. However, research has consistently shown that what should be the most adequate setting for mindless repetition is abuzz with improvisation. Research on repetitive and standardized work in offices and factory floors has shown that standardized procedures are often inadequate for the outcomes they strive for, because of three different sets of reasons. First, prescribed procedures designed by managers or experts are often conceived without first-hand knowledge of everyday contingencies of production and service processes. Their authors lack the tacit knowledge needed to design procedures that are robust enough to meet the reality of everyday work and escape unscathed (Orr, 1996). Second, even if prescribed procedures are designed with first hand knowledge of their target tasks, they still fail to address the tacit component of work. The knowledge and practices involved in carrying out a task have a tacit component and an explicit component. By definition, only the explicit component of work can be articulated and prescribed. Research on such menial tasks as processing funding requests in a government agency (Blau & Scott, 1962) shows that even simple tasks have a significant tacit component that cannot be pre-defined. Instead, this tacit knowledge is learned in practice, as employees improvise their own tactics to address the situated challenges they face.

Third, there is a set of practices, such as articulation work (Suchman, 1995), upon which the organization's goals hinge but which remain invisible because of power dynamics. These practices can be at least partially prescribed, however they are not because they are carried out

by members who enact the dominated role in the web of power relationships in the organization to which they belong. The prescribed goals of an organization are thus not only helped, but actually depend on employees' improvisations to a much larger extent than on prescribed procedures.

The process of repetitive work needs improvised conditions for action

There are some instances where prescribed procedures are adequate for the organization's goals. Their repeated enactment is sufficient to deliver their prescribed outcomes. But even in these cases, employees are often challenged to shape their conditions for action. Research has shown that production and service processes are filled with micro-variations in their conditions for action (Lipsky, 1980; McMahon & Ivancevich, 1976). These variations fall into one of three major categories. First, employees may have to deal with a challenge for which there are no prescribed procedures. This type of variation can have origins as infrequent as changes in customer behavior in the early stages of competitive discontinuities or as frequent as unexpected customer request in front-office roles. Research has shown that in such cases employees shape the situated challenge or at least interpret it flexibly enough to turn it into a situation typified in their prescribed work procedures (Bitner, Booms, & Mohr, 1994).

Second, employees may experience a shortage of resources, including their own time, to enact prescribed procedures. Everyday situations such as unexpected levels of specific challenges or disruptions in the supply of materials are enough to call for improvisation to be able to carry out work procedures. In such instances, employees can bricolate, making do with available resources to enact prescribed practices (Tyre & Orlikowski, 1994). The challenge here lies in being able to have enough interpretive flexibility to use resources in different ways. This challenge is greater when employees need to bricolate using work tools that are central to their

professional identity (Weick, 1996). Independently of how difficult it is, bricolage allows employees to be able to fall back in prescribed procedures by creating on the spot the tools and materials these require to be enacted repetitively.

Third, there are instances when the breakdown of conditions for actions is of such an extent that employees need to enact a whole interpretative and action structure where prescribed procedures make sense again (Lanzara, 1983). In such crises, people struggle to make their conditions for action sensible as they decide on an appropriate course of action. The challenge here is not to improvise work practices but also to improvise a set of conditions for action to help build a frame under which they can act. Research has shown that, when pressed to do it, agents are able to draw on their ongoing action to reconstruct a sensible frame of interpretation that is enough to support repetitive work procedures (Hutchins, 1991). This triggers a sensemaking process where repeated action makes the context more sensible, which in turn helps agents generate the conditions that prescribed work practices require.

Improvisations to support repetitive work need to be hidden

The prevalence of improvisation in repetitive work settings creates a challenge that employees need to address not only for their own sake, but also to protect the organization's resiliency. Research on the experience of management has shown that managers do not take deviation from prescribed procedures lightly (Watson, 2001). Deviation from procedures challenges a significant element of the manager's ethos: the need to be in control. For if improvisation is the hallmark of employees' experience, even when they engage in repetitive work, how can managers expect to shape their employees work practices? Not only do they have little say in how employees carry out their everyday work but also they loose visibility of the process and outcomes of that work. If formal work representation schemes are challenged to

measure prescribed work procedures adequately, then they will struggle even more to represent improvised work practices.

If for no other reasons, managers resist improvisation because it threatens their professional identity (Thompson & McHugh, 1990). If managers are not able to control their employees work to some extent, they will be hard pressed to maintain a narrative of competence with their peers and their superiors, no matter what the outcome of their employees' improvisations are. This means that if employees need to improvise to repeatedly reach their goals, they need to improvise a set of practices to hide these improvisations under a façade of compliance (Lombard, 1955; Mars, 1983). By creating such a façade, workers are enacting the improvisations necessary to carry out their work while keeping those improvisations hidden from managers' scrutiny. In workplaces where managers use of IT for surveillance and control is low, this façade is achieved by complying with prescribed procedures while managers are observing the team and improvising when they are not (Orlikowski, 1991). In workplaces where managers use IT to exert surveillance and control, creating such a façade is harder work (Townsend, 2005). In those settings, employees have an additional set of practices to improvise. In addition to improvising a set of practices to be able to perform their everyday work efficiently and repetitively, employees need to improvise a set of tasks to create a representation of compliance with prescribed work procedures.

Repetitive work needs identity work

The extent of improvisation required to sustain repetitive work suggests that standardized work in the office and in the factory floor is all but repetitive. However, research has shown that this has not stopped employees of interpreting their experience as repetitive and alienating

(Ashforth et al., 1999). This adds a further set of improvisational tasks necessary to support repetitive work: identity work.

The very same studies that highlight that repetition work is rich in improvisation show that employees may interpret their experience as repetitive and alienating (Blau et al., 1962; Burawoy, 1979; Gouldner, 1954). This does not weaken the case for the importance of improvisation for achieving the organization's goals repeatedly. Instead it strengthens it by uncovering a further challenge that employees need to improvise upon to be able to carry out their everyday work. This challenge is that of keeping a positive identity (Goffman, 1967). Research has shown that jobs at the lower rungs of the organization, especially those that are limited to follow prescribed standardized procedures repetitively are subject to some level of stigma (Davis, 1982). These jobs are on the margins of dirty work and as such they pose a considerable threat to identity. Holding such a job is seen as a negative achievement in society at large. These workers need to integrate this negative feature of their experience in a narrative about their selves (i.e. their identity) in a way that allows them to keep this narrative positive (cf. Giddens, 1991). This is far from a trivial accomplishment because the self and others use an agent's job as a major resource when making sense of identity. This means that agents need to socially improvise a positive narrative about their experience that is not only persuasive for themselves but also for others. Research has uncovered three major tactics that employees enact to address this challenge. The first is by improvising positive narratives about their experience at work (Pollner & Emerson, 1976). Studies on dirty work have shown that employees in these conditions, socially interpret their work as providing an important albeit undervalued service for society at large. Employees engaging in this type of work also draw a positive identity from their job specific knowledge and in their insight the multiple layers of work that others consider

menial and unchallenging (Fine, 1996). When enacting these tactics, employees are able to enact a positive identity from tasks that are stigmatized by society at large. Researchers that have carried out micro-level observations of these conversations have also found a cathartic component in the social narrative process through which employees keep a positive identity (Allport, 1945). Joking and complaining about their managers, their customers and the general public, helps these employees release the tension that results from facing a permanent identity threat resulting from the stigmatization of their occupation.

The second tactic that employees engaging in repetitive work enact to keep a positive sense of identity is improvising alternative sources of competence (Noble & Lupton, 1998). Research on employee deviance has shown that many of employees' petty crimes are more than a source of unprescribed rewards (Ditton, 1979). These practices are also games that employees use to create a positive sense of identity. Employees make sense of their experience in the organization by their skill and success at deviance, instead of relying on their skill and competence in executing their prescribed work tasks to keep a positive sense of identity (Roy, 1960). In those places in organizations where deviance is institutionalized by unprescribed norms, experienced employees also improvise for themselves the role as mentors of novice deviants, which also contributes to their sense of self-worth (Hollinger & Clark, 1982).

The third tactic that employees enact to keep a positive sense of identity while engaging in repetitive work is to build their identity around activities unrelated to work (D'Abate, 2005). In this case, employees need to improvise ways to bring their outside activities into their work settings. Research on loafing (e.g. Lim, 2002) has shown that employees are able to improvise backstages even in contexts of extensive surveillance, where they can engage in non-work activities. Employees have taken advantage of the diffusion of internet-enabled computers to

improvise practices of cyberloafing which are far more effective at allowing employees to engage in non-work activities while keeping a façade of productivity. Whether they are carried out on-line or off-line, these non-work activities allow employees to sidestep work as a source of identity. Their job is little more than a way to obtain resources to support their presence in contexts where their identities are indeed at stake.

As a whole, the extent to which repetitive work depends upon improvisation only addresses one side of the relationship between these two modes of action. To bring the mutual constitution of repetitive work and improvisation full circle, it is necessary to explain how improvisation in organizations depends on repetitive work.

Improvisation is mastered in repetitive work

The level expert performance such as the improvisational skill required by repetitive work is achieved through repetition. Ericsson, Krampe and Tesch-Romer's (1993) extensive review of the literature on mastering a skill highlights that repetitive practice of a skill is the main process through which skills are learned and mastered. A number of studies provide empirical support to this argument (Brown et al., 1991; Lave et al., 1991), including research on improvisation in jazz (Berliner, 1994). This point, however, has been lost in the translation of insights from improvisation in the arts to improvisation in business (Kamoche, Cunha, & Cunha, 2003). The management literature chooses instead to highlight the role of virtuosity. In this view, improvisation is a skill that is available once virtuosity in one's work is achieved (Hatch, 1997). Although virtuosity favors improvisation, it does not fully account for the development of the skill to improvise in organizational contexts.

A possible explanation for employees' proficiency in improvisation is that this skill is acquired before joining their organization. However, thick descriptions of everyday practice in organizations show that improvisation at work requires the acquisition of procedural knowledge about local resources and tools (e.g. Orlikowski & Hofman, 1997), which can only be acquired after using these materials according to prescribed procedures for an extended period of time. Moreover, studies of the development of expertise show that expert performers are only able to apply their skills within a specific domain (Glaser, 1996). This means that even if agents acquired improvisational skills in other contexts, it will be difficult to apply them to their everyday work: great jazz improvisers are unlikely to be great theater improvisers. It is thus in employees everyday work that their improvisational skills are developed. Empirical accounts of improvisational behavior in organizations show that improvisation is a skill developed at work or, more specifically, in employees' early experience at work (Benson, 1986; Van Maanen, 1976). When employees first join an organization, their experience is akin to structured repetition and thus features all the conditions that research has deemed necessary for the development of expertise in any given skill (Ericsson & Charness, 1994). These conditions include: motivation to engage in repetitive practice, tasks designed taking into account employees' pre-existing knowledge, frequent and specific feedback, and sharing the learning strategies of experienced peers.

The first condition for the development of expertise in any skill, including improvisation is the motivation for the amount of practice that agents need to undertake to become proficient. Research on everyday work in organizations shows that repetitive work provides at least two strong motivations to practice improvisation: seeking unprescribed rewards (Sallaz, 2002) and keeping a positive face (Goffman, 1969; Leidner, 1991). Research on work deviance shows that

employees interpret their salary and bonus as, at best, a partial compensation for the effort they put into their prescribed work (Mars, 1983). The gap between employees' interpretation of their effort and their interpretation of their reward motivates improvisation. The literature on organizational deviance has consistently shown that employees prefer to enact unprescribed tactics to obtain unprescribed rewards instead of trying to negotiate prescribed rewards to match their interpreted effort (Greenberg, 1990). Because managers seek to find these unprescribed rewards and eliminate them, obtaining unprescribed compensation requires employees to improvise repeatedly to engage in pilferage and other forms of deviance.

The second motivation for employees to acquire the skill to improvise is the need to preserve a positive face. The inadequacy of prescribed procedures to achieve prescribed roles, which makes improvisation so central to repetitive work, fosters improvisation. The argument is not that employees will improvise unprescribed procedures because of their concern for the organization's performance. Instead, the argument is that employees will improvise unprescribed procedures to keep a positive face (Ashforth & Humphrey, 1993). Employees' inability to meet their prescribed goals is not only detrimental to their organization's performance but also to the value of their identity at work. When employees work puts them in contact with others, their inability to perform their role because of inadequate prescribed procedures makes it hard for them to keep an identity of competence. In such roles, employees are acting in a front stage and as such they are compelled to improvise upon prescribed resources, rules and procedures to meet their role's goals so as to keep a positive face in each of their work interactions (McCammon & Griffin, 2000). When employees work is shielded from external scrutiny, employees still need to keep a positive face. The difference is that they now are their own audience. The motivation here comes from the need to keep a positive narrative of one's experience at work. Short of justifying

their inability to comply with prescribed goals or prescribed procedures, employees need to improvise on available resources, processes and procedures to keep a self-image of competence (Sewell, 1998).

The motivation to engage in improvisation in repetitive work is present for both newcomers and experienced employees. This motivation, however, leads to different sets of practices. For newcomers, the desire of obtaining unprescribed rewards and the need to keep a positive face motivates them to engage in repetitive work to practice and learn improvisation. For experienced employees, these rewards and this need to keep a positive face motivate them to adapt repetitive work to newcomers conditions, to provide them with frequent and detailed feedback, thus sharing with newcomers their own learning strategies – the three other conditions for acquiring proficiency in a skill such as improvisation through repetitive practice.

Designing work tasks to take into account the pre-existing improvisational skill of each employee seems impractical in most prescribed jobs, especially in those that entail repetitive work (Salancik & Pfeffer, 1978). Organizations tend to have fixed prescribed rules and procedures which are not changed for the sake of each incoming employee. However the interdependent nature of unprescribed work requires and allows existing members to adapt unprescribed tasks to match newcomers' skill in improvisation. Unprescribed work is very much at stake for existing members of the organization. Unprescribed work is a source of unprescribed rewards, a source of stability of effort and a source of positive identity (Selznick, 1949). But unprescribed work is not only at stake because of its benefits for employees but also because of its contested nature. Unprescribed work threatens managers' power and professional identity and as such it needs to be kept as invisible as possible. When newcomers join an organizational unit, they threaten unprescribed work because they are not accomplished in its performance and are

often unaware of the norms that guide it and sometimes of its very existence (Burawoy, 1979). Unprescribed work is however often an interdependent achievement. When prescribed work is interdependent, members cannot engage in it without the cooperation of newcomers because of the nature of their tasks. If employees need extra parts and tools from a warehouse staffed by a newcomer who is not aware of the unprescribed practice of supplying resources beyond prescribed needs, members' unprescribed work can be jeopardized (Vaughan, 1999).

Even when prescribed and unprescribed work are independent, newcomers can expose unprescribed work because of their limited improvisational skills, and open it to managers' scrutiny. This has the potential of jeopardizing members' ability to carry out improvised work practices thus reducing unprescribed rewards or increasing work effort. In industrial settings where pay is tied to production rates newcomers need to comply from the start with unprescribed practices such as goldbricking. If they fail to do so, they may bring rate increases to the whole unit (Beynon, 1973; see also Whyte, 1948).

Because improvised practices carry such weight for employees, newcomers are often subjected to an informal and unprescribed socialization process (Kemper, 1966). The purpose of this process is to train newcomers in unprescribed work practices. Unprescribed work, however, is a situated accomplishment – an accomplishment contingent on local conditions and available resources. It can therefore hardly be prescribed. Instead, experienced employees train newcomers through a process of legitimate peripheral participation in improvisation in repetitive work (e.g. Orr, 1996; cf. Wenger, 2000). Two features of this process – practicing improvisation skills on the job and being closely observed by peers – provide the level of feedback necessary for breaking the plateau of learning that can only be overcome through repetitive practice. Practicing a skill in the context of legitimate peripheral participation is a social experience. This has two

consequences for feedback. The first is that feedback is a social process (Feldman, 1981). This means that both the learner's and his peers' monitoring of the learner's work are sources of feedback. This makes feedback richer and more immediate than when employees engage in repetitive work on their own (Greller & Herold, 1975; Weiss & Knight, 1980). Social feedback is richer because it draws not only on the knowledge of the learner but also on the experience of its peers. It is also more immediate because experienced improvisers are likely to catch mistakes and find areas for development earlier. The social nature of practicing a skill such as improvisation in organizations also means that feedback is interpreted socially (Reichers, 1987). This helps thwart challenges to face that may impede acquiring proficiency in improvisation and allow peers to share tactics to help the learners improvise in a way that they could not do on its own (Baumeister, 1982). Moreover, the social nature of practicing improvisation in organizations means that feedback includes the learning strategies of experienced peers thus providing newcomers with the sharing of the effective learning structures that underpin exceptional improvisational performance (Ericsson et al., 1994).

After a period of repetition in order to reach a state of self-mastery, the individual practitioner is able to convert repetition into variation. He or she does so by means of reaching a state of communion with the task and the situation. The task is no longer an external imposition, but a means for personal development. When repetition equates mastery, "the body reacts instinctively and spontaneously to each concrete situation without any prior distinction and discrimination because it has been systematically emptied of idiosyncrasies and conceptual biases" (Chia, 2003, p. 975). In this pure experience, as Chia calls it, the intensity of engagement is so high that movement seems to be coordinated without effort, thought, or deliberation. Only when such a high level of pure experience is attained, is the individual free to immerse

himself/herself in the challenge of improvisation, which transcends the current state of the organization and leads it to a new, previously unimagined space.

ROTUINE AS DEVIATION

The dominant view of routine in organizations sees it a stable feature of organizational experience resulting from the compliance with prescribed roles, rules and procedures. This type of routine can be found in partial descriptions of the experience of repetitive work (e.g., the 'enforced' pattern of bureaucracy in Gouldner, 1954). However, most thick descriptions of repetitive work (Lombard, 1955; Van Maanen, 1973), even those of everyday work in government bureaucracies (Blau, 1955; Lipsky, 1980), hint at a very different view of routine. In these studies, routine is an everyday, effortful and mindful accomplishment that hinges on employees ability and motivation to deviate from prescribed work practices. Routine is the outcome of three reinforcing processes of improvisation. The first process includes those improvisations that seek to create the conditions for repetitive work. The routine achievement of prescribed outcomes of repetitive work demands frequent micro-adaptations to prescribed rules and procedures, flexible interpretations of conditions for action, and micro-tactics that allow employees to preserve a positive sense of face. The second process includes those practices that seek to create the conditions for employees to develop their improvisational skills. The improvisations enacted to achieve the organization's prescribed goals are challenging and situated accomplishments. Expertise in organizational improvisation can only be developed while engaging in everyday work. However, the frequent mistakes associated with acquiring skill in improvisation are threats to experienced members' ability to continually enact their own improvisations. Learning to improvise to engage in repetitive work is thus a joint

accomplishment of newcomers and experienced employees. It is not enough for newcomers to experiment with improvisation in their everyday work in order to learn this skill. Learning to improvise requires pushing work practices to the point where mistakes are likely. Mistakes, however, expose improvisation to managers, threatening employees' ability to continue to engage in it. Experienced members thus need to improvise on newcomers' mistakes to uphold routine so that learning improvisation does not jeopardize the persistence of this practice. Finally, and perhaps more importantly, employees need to enact a third set of improvisations to keep improvisation and its development hidden from managers' scrutiny. Failing to do so would invite efforts to enforce compliance, jeopardizing employees' ability to go on with repetitive work and their organizations' ability to achieve its prescribed goals. Routine thus emerges from mutual constitution of improvisation and repetitive work.

This approach highlights the adaptive nature of routine. The literature on strategy and organization in fast-changing competitive contexts has underscored the need to create dynamic capabilities that allow the organization to adapt to ever-changing competitive challenges (Brews & Hunt, 1999; Brown et al., 1997; Ciborra, 1996; Lane & Maxfield, 1996). The assumption here is that innovation and novelty and the major, if not the only processes that are able to keep the organization moving fast enough to keep up with and, hopefully, outpace its competitors. Routine is framed as a threat to organizations' flexibility and adaptability (Miller, 1993), a heritage of the management ethos of a past when efficiency and stability were the ultimate goals of organizations (Barnard, 1938; Taylor, 1947). The view of routine as deviation that we developed here complements that approach by explaining routine as an effortful and mindful accomplishment. If routine is the outcome of multiple improvisational processes, then it is as adaptive as novelty and innovation. To be able to keep delivering the organizations prescribed

goals, employees need to adapt their company's products and services, and the procedures to produce and deliver them to the situated challenges created by customers and competitors, which materialize as variations in employees' conditions for action. As these micro-improvisations aggregate and interact, the organization generates an emergent strategy that orbits around new competitive challenges and improvised ways of addressing them. However, because employee' success in enacting routine depends on their ability to keep their improvisations hidden from managers, it is challenging for the latter to have access to the knowledge of unfolding competitive dynamics and to the improvised tactics to address them that surface in employees everyday work. Nonetheless, this does not jeopardize their organization's flexibility and adaptability, it just limits managers' ability to learn about improvisations and institutionalized them as prescribed practices. Routine can thus be as adaptive as novelty and innovation.

Framing routine as an improvisational accomplishment also highlights the prevalence and importance of improvisation in organizations. The management literature has mostly circumscribed improvisation to novelty and innovation (Cunha, Cunha, & Kamoche, 1999; Miner et al., 2001; Peplowski, 1998). In this view, improvisation is about exploration – finding and taking advantage of new opportunities as they present themselves in the market. However, the tight relationship between improvisation and repetitive work suggests that if anything, improvisation is as important for routine as it is for novelty because routine is as challenging an accomplishment as innovation. Improvisation is thus as important for exploitation as it is for exploration. Organizations' ability to repeatedly and consistently enact repetitive work depends on their local conditions and motivations for improvisation, not on the organizational conditions and motivations for compliance.

CONCLUSION

The core contribution of this paper is to suggest an alternative view of routine. Drawing on evidence scattered through thick descriptions of everyday life in organizations, we argued that routine is the outcome of situated deviations from prescribed roles and procedures and is, in itself, a source of emergent strategic action. The dominant conception of routine see it as a mindless and effortless process of compliance. We explained that routine can also be a mindful and effortful process of improvisation. We further suggested that this process is adaptive. As employees enact local improvisation to consistently enact repetitive procedures and achieve prescribed goals, they are contributing to the sedimentation of unprescribed practices into an emergent strategy for the organization as a whole.

Previous research has shown that routines, meaning habitual procedures to carry out a specific task, are sources of adaptation. We used the descriptions of repetitive work dispersed across available organizational ethnographies and other micro-accounts of everyday life in organizations to push this literature further by showing that routine, meaning the work needed to consistently and repeatedly enact prescribed procedures and goals is in itself a powerful process of adaptability.

Routine is often seen as a tranquil pool of compliance and therefore a threat to organizational flexibility. We explained that the apparent stability in organizational units that carry out repetitive work is enacted is achieved through a constant flow of local improvisations. Routine is a powerful process of adaptation, albeit one that remains invisible to managers. The resilience that many large bureaucracies and complex organizations have shown in highly competitive marketplaces, it is not due to their top managers' ability to enact innovative strategic

breakthroughs. Instead their resiliency is due to their ability to adapt to environmental challenges through their employees' improvisations as they struggle to produce and reproduce routine.

The management literature has called upon large organizations to learn from the adaptability that small and more flexible organizations achieve through novelty and innovation. The potential role of routine as a source of adaptation suggests that small organizations can also learn from their larger siblings how to draw on their routine processes to allow situated adaptations to sediment into organizational adaptability.

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